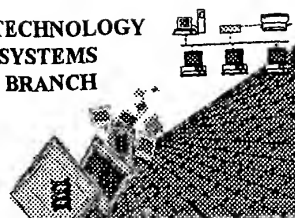


## **RAW SEQUENCE LISTING** **ERROR REPORT**

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/014,099E  
Source: OPE  
Date Processed by STIC: 4/3/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN ASSISTANCE: e-mail: [robert.wax@uspto.gov](mailto:robert.wax@uspto.gov) Telephone: 703-306-4119

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.0 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

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Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebs/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202  
EFFECTIVE MAY 1, 2003 (via USPS): Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,  
2011 South Clark Place, Arlington, VA 22202
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Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 04/01/2003



OIPE

## RAW SEQUENCE LISTING

DATE: 04/03/2003

PATENT APPLICATION: US/10/014,099E

TIME: 14:43:10

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

5 <110> APPLICANT: KUEHN, Ralf  
 6 FELDER, Susanne  
 7 SCHWENK, Frieder  
 8 KUETER-LUKS, Birgit  
 9 FAUST, Nicole  
 11 <120> TITLE OF INVENTION: Modified Recombinase  
 13 <130> FILE REFERENCE: 012787wo/JH/ml  
 15 <140> CURRENT APPLICATION NUMBER: US/10/014,099E  
 16 <141> CURRENT FILING DATE: 2003-03-31  
 18 <160> NUMBER OF SEQ ID NOS: 108  
 20 <170> SOFTWARE: PatentIn Ver. 2.1

## ERRORED SEQUENCES

Does Not Comply  
 Corrected Diskette Needed

1404 <210> SEQ ID NO: 23  
 1405 <211> LENGTH: 620  
 1406 <212> TYPE: PRT  
 1407 <213> ORGANISM: Artificial Sequence  
 W--> 1408 <220> FEATURE: insert 2207 This numeric identifier is MANDATORY whenever  
 1408 <223> OTHER INFORMATION: Description of Artificial Sequence: DNA sequence <2217, <2227,  
 1409 coding for fusion protein C31-Int(CNLS) or <2237  
 is shown  
 1411 <400> SEQUENCE: 23  
 1412 Met Thr Gln Gly Val Val Thr Gly Val Asp Thr Tyr Ala Gly Ala Tyr  
 1413 1 5 10 15  
 1415 Asp Arg Gln Ser Arg Glu Arg Glu Asn Ser Ser Ala Ala Ser Pro Ala  
 1416 20 25 30  
 1418 Thr Gln Arg Ser Ala Asn Glu Asp Lys Ala Ala Asp Leu Gln Arg Glu  
 1419 35 40 45  
 1421 Val Glu Arg Asp Gly Gly Arg Phe Arg Phe Val Gly His Phe Ser Glu  
 1422 50 55 60  
 1424 Ala Pro Gly Thr Ser Ala Phe Gly Thr Ala Glu Arg Pro Glu Phe Glu  
 1425 65 70 75 80  
 1427 Arg Ile Leu Asn Glu Cys Arg Ala Gly Arg Leu Asn Met Ile Ile Val  
 1428 85 90 95  
 1430 Tyr Asp Val Ser Arg Phe Ser Arg Leu Lys Val Met Asp Ala Ile Pro  
 1431 100 105 110  
 1433 Ile Val Ser Glu Leu Leu Ala Leu Gly Val Thr Ile Val Ser Thr Gln  
 1434 115 120 125  
 1436 Glu Gly Val Phe Arg Gln Gly Asn Val Met Asp Leu Ile His Leu Ile  
 1437 130 135 140  
 1439 Met Arg Leu Asp Ala Ser His Lys Glu Ser Ser Leu Lys Ser Ala Lys  
 1440 145 150 155 160

This is NOT  
 a DNA sequence.

## RAW SEQUENCE LISTING

DATE: 04/03/2003

PATENT APPLICATION: US/10/014,099E

TIME: 14:43:10

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

```

1442 Ile Leu Asp Thr Lys Asn Leu Gln Arg Glu Leu Gly Gly Tyr Val Gly
1443                165                170                175
1445 Gly Lys Ala Pro Tyr Gly Phe Glu Leu Val Ser Glu Thr Lys Glu Ile
1446                180                185                190
1448 Thr Arg Asn Gly Arg Met Val Asn Val Val Ile Asn Lys Leu Ala His
1449                195                200                205
1451 Ser Thr Thr Pro Leu Thr Gly Pro Phe Glu Phe Glu Pro Asp Val Ile
1452                210                215                220
1454 Arg Trp Trp Trp Arg Glu Ile Lys Thr His Lys His Leu Pro Phe Lys
1455 225                230                235                240
1457 Pro Gly Ser Gln Ala Ala Ile His Pro Gly Ser Ile Thr Gly Leu Cys
1458                245                250                255
1460 Lys Arg Met Asp Ala Asp Ala Val Pro Thr Arg Gly Glu Thr Ile Gly
1461                260                265                270
1463 Lys Lys Thr Ala Ser Ser Ala Trp Asp Pro Ala Thr Val Met Arg Ile
1464                275                280                285
1466 Leu Arg Asp Pro Arg Ile Ala Gly Phe Ala Ala Glu Val Ile Tyr Lys
1467                290                295                300
1469 Lys Lys Pro Asp Gly Thr Pro Thr Thr Lys Ile Glu Gly Tyr Arg Ile
1470 305                310                315                320
1472 Gln Arg Asp Pro Ile Thr Leu Arg Pro Val Glu Leu Asp Cys Gly Pro
1473                325                330                335
1475 Ile Ile Glu Pro Ala Glu Trp Tyr Glu Leu Gln Ala Trp Leu Asp Gly
1476                340                345                350
1478 Arg Gly Arg Gly Lys Gly Leu Ser Arg Gly Gln Ala Ile Leu Ser Ala
1479                355                360                365
1481 Met Asp Lys Leu Tyr Cys Glu Cys Gly Ala Val Met Thr Ser Lys Arg
1482                370                375                380
1484 Gly Glu Glu Ser Ile Lys Asp Ser Tyr Arg Cys Arg Arg Arg Lys Val
1485 385                390                395                400
1487 Val Asp Pro Ser Ala Pro Gly Gln His Glu Gly Thr Cys Asn Val Ser
1488                405                410                415
1490 Met Ala Ala Leu Asp Lys Phe Val Ala Glu Arg Ile Phe Asn Lys Ile
1491                420                425                430
1493 Arg His Ala Glu Gly Asp Glu Glu Thr Leu Ala Leu Leu Trp Glu Ala
1494                435                440                445
1496 Ala Arg Arg Phe Gly Lys Leu Thr Glu Ala Pro Glu Lys Ser Gly Glu
1497                450                455                460
1499 Arg Ala Asn Leu Val Ala Glu Arg Ala Asp Ala Leu Asn Ala Leu Glu
1500 465                470                475                480
1502 Glu Leu Tyr Glu Asp Arg Ala Ala Gly Ala Tyr Asp Gly Pro Val Gly
1503                485                490                495
1505 Arg Lys His Phe Arg Lys Gln Gln Ala Ala Leu Thr Leu Arg Gln Gln
1506                500                505                510
1508 Gly Ala Glu Glu Arg Leu Ala Glu Leu Glu Ala Ala Glu Ala Pro Lys
1509                515                520                525
1511 Leu Pro Leu Asp Gln Trp Phe Pro Glu Asp Ala Asp Ala Asp Pro Thr
1512                530                535                540
1514 Gly Pro Lys Ser Trp Trp Gly Arg Ala Ser Val Asp Asp Lys Arg Val

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/014,099E

DATE: 04/03/2003

TIME: 14:43:10

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

```

1515 545          550          555          560
1517 Phe Val Gly Leu Phe Val Asp Lys Ile Val Val Thr Lys Ser Thr Thr
1518          565          570          575
1520 Gly Arg Gly Gln Gly Thr Pro Ile Glu Lys Arg Ala Ser Ile Thr Trp
1521          580          585          590
1523 Ala Lys Pro Pro Thr Asp Asp Asp Glu Asp Asp Ala Gln Asp Gly Thr
1524          595          600          605
1526 Glu Asp Val Ala Ala Pro Lys Lys Arg Lys Val
1527 610          615          620

```

3316 &lt;210&gt; SEQ ID NO: 65

3317 &lt;211&gt; LENGTH: 335

3318 &lt;212&gt; TYPE: PRT

3319 &lt;213&gt; ORGANISM: Artificial Sequence

W--> 3320 <220> FEATURE: *insert*

3320 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: vector

3321 pBS-SSV3

OK-&gt; 3323 &lt;400&gt; SEQUENCE: 65

```

3324 Met Thr Lys Asp Lys Thr Arg Tyr Lys Tyr Gly Asp Tyr Ile Leu Arg
3325 1          5          10          15
3327 Glu Arg Lys Gly Arg Tyr Tyr Val Tyr Lys Leu Glu Tyr Glu Asn Gly
3328          20          25          30
3330 Glu Val Lys Glu Arg Tyr Val Gly Pro Leu Ala Asp Val Val Glu Ser
3331          35          40          45
3333 Tyr Leu Lys Met Lys Leu Gly Val Val Gly Asp Thr Pro Leu Gln Ala
3334          50          55          60
3336 Asp Pro Pro Gly Phe Glu Pro Gly Thr Ser Gly Ser Gly Gly Lys
3337 65          70          75          80
3339 Glu Gly Thr Glu Arg Arg Lys Ile Ala Leu Val Ala Asn Leu Arg Gln
3340          85          90          95
3342 Tyr Ala Thr Asp Gly Asn Ile Lys Ala Phe Tyr Asn Tyr Leu Met Asn
3343          100          105          110
3345 Glu Arg Gly Ile Ser Glu Lys Thr Ala Lys Asp Tyr Ile Asn Ala Ile
3346          115          120          125
3348 Ser Lys Pro Tyr Lys Glu Thr Arg Asp Ala Gln Lys Ala Tyr Arg Leu
3349          130          135          140
3351 Phe Ala Arg Phe Leu Ala Ser Arg Asn Ile Ile His Asp Glu Phe Ala
3352 145          150          155          160
3354 Asp Lys Ile Leu Lys Ala Val Lys Val Lys Lys Ala Asn Ala Asp Ile
3355          165          170          175
3357 Tyr Ile Pro Thr Leu Glu Glu Ile Lys Arg Thr Leu Gln Leu Ala Lys
3358          180          185          190
3360 Asp Tyr Ser Glu Asn Val Tyr Phe Ile Tyr Arg Ile Ala Leu Glu Ser
3361          195          200          205
3363 Gly Val Arg Leu Ser Glu Ile Leu Lys Val Leu Lys Glu Pro Glu Arg
3364          210          215          220
3366 Asp Ile Cys Gly Asn Asp Val Cys Tyr Tyr Pro Leu Ser Trp Thr Arg
3367 225          230          235          240
3369 Gly Tyr Lys Gly Val Phe Tyr Val Phe His Ile Thr Pro Leu Lys Arg
3370          245          250          255

```

## RAW SEQUENCE LISTING

DATE: 04/03/2003

PATENT APPLICATION: US/10/014,099E

TIME: 14:43:10

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

3372 Val Glu Val Thr Lys Trp Ala Ile Ala Asp Phe Glu Arg Arg His Lys  
 3373 260 265 270  
 3375 Asp Ala Ile Ala Ile Lys Tyr Phe Arg Lys Phe Val Ala Ser Lys Met  
 3376 275 280 285  
 3378 Ala Glu Leu Ser Val Pro Leu Asp Ile Ile Asp Phe Ile Gln Gly Arg  
 3379 290 295 300  
 3381 Lys Pro Thr Arg Val Leu Thr Gln His Tyr Val Ser Leu Phe Gly Ile  
 3382 305 310 315 320  
 3384 Ala Lys Glu Gln Tyr Lys Lys Tyr Ala Glu Trp Leu Lys Gly Val  
 3385 325 330 335

3524 &lt;210&gt; SEQ ID NO: 67

3525 &lt;211&gt; LENGTH: 479

3526 &lt;212&gt; TYPE: PRT

3527 &lt;213&gt; ORGANISM: Artificial Sequence

W--> 3528 <220> FEATURE: *insert*

3528 &lt;223&gt; OTHER INFORMATION: Description of Artificial Sequence: DNA sequence

3529 (coding for fusion protein NLS-XisA)

EX-&gt; 3531 &lt;400&gt; SEQUENCE: 67

3532 Met Pro Lys Lys Lys Arg Lys Val Gln Asn Gln Gly Gln Asp Lys Tyr  
 3533 1 5 10 15  
 3535 Gln Gln Ala Phe Ala Asp Leu Glu Pro Leu Ser Ser Thr Asp Gly Ser  
 3536 20 25 30  
 3538 Phe Leu Gly Ser Ser Leu Gln Ala Gln Gln Gln Arg Glu His Met Arg  
 3539 35 40 45  
 3541 Thr Lys Val Leu Gln Asp Leu Asp Lys Val Asn Leu Arg Leu Lys Ser  
 3542 50 55 60  
 3544 Ala Lys Thr Lys Val Ser Val Arg Glu Ser Asn Gly Ser Leu Gln Leu  
 3545 65 70 75 80  
 3547 Arg Ala Thr Leu Pro Ile Lys Pro Gly Asp Lys Asp Thr Asn Gly Thr  
 3548 85 90 95  
 3550 Gly Arg Lys Gln Tyr Asn Leu Ser Leu Asn Ile Pro Ala Asn Leu Asp  
 3551 100 105 110  
 3553 Gly Leu Lys Thr Ala Glu Glu Glu Ala Tyr Glu Leu Gly Lys Leu Ile  
 3554 115 120 125  
 3556 Ala Arg Lys Thr Phe Glu Trp Asn Asp Lys Tyr Leu Gly Lys Glu Ala  
 3557 130 135 140  
 3559 Thr Lys Lys Asp Ser Gln Thr Ile Gly Asp Leu Leu Glu Lys Phe Ala  
 3560 145 150 155 160  
 3562 Glu Glu Tyr Phe Lys Thr His Lys Arg Thr Thr Lys Ser Glu His Thr  
 3563 165 170 175  
 3565 Phe Phe Tyr Tyr Phe Ser Arg Thr Gln Arg Tyr Thr Asn Ser Lys Asp  
 3566 180 185 190  
 3568 Leu Ala Thr Ala Glu Asn Leu Ile Asn Ser Ile Glu Gln Ile Asp Lys  
 3569 195 200 205  
 3571 Glu Trp Ala Arg Tyr Asn Ala Ala Arg Ala Ile Ser Ala Phe Cys Ile  
 3572 210 215 220  
 3574 Thr Phe Asn Ile Glu Ile Asp Leu Ser Gln Tyr Ser Lys Met Pro Asp  
 3575 225 230 235 240  
 3577 Arg Asn Ser Arg Asn Ile Pro Thr Asp Ala Glu Ile Leu Ser Gly Ile

*This  
is not  
a DNA  
sequence.*

## RAW SEQUENCE LISTING

DATE: 04/03/2003

PATENT APPLICATION: US/10/014,099E

TIME: 14:43:10

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

3578                    245                    250                    255  
 3580 Thr Lys Phe Glu Asp Tyr Leu Val Thr Arg Gly Asn Gln Val Asn Glu  
 3581                    260                    265                    270  
 3583 Asp Val Lys Asp Ser Trp Gln Leu Trp Arg Trp Thr Tyr Gly Met Leu  
 3584                    275                    280                    285  
 3586 Ala Val Phe Gly Leu Arg Pro Arg Glu Ile Phe Ile Asn Pro Asn Ile  
 3587                    290                    295                    300  
 3589 Asp Trp Trp Leu Ser Lys Glu Asn Ile Asp Leu Thr Trp Lys Val Asp  
 3590 305                    310                    315                    320  
 3592 Lys Glu Cys Lys Thr Gly Glu Arg Gln Ala Leu Pro Leu His Lys Glu  
 3593                    325                    330                    335  
 3595 Trp Ile Asp Glu Phe Asp Leu Arg Asn Pro Lys Tyr Leu Glu Met Leu  
 3596                    340                    345                    350  
 3598 Ala Thr Ala Ile Ser Lys Lys Asp Lys Thr Asn His Ala Glu Ile Thr  
 3599                    355                    360                    365  
 3601 Ala Leu Thr Gln Arg Ile Ser Trp Trp Phe Arg Lys Val Glu Leu Asp  
 3602                    370                    375                    380  
 3604 Phe Lys Pro Tyr Asp Leu Arg His Ala Trp Ala Ile Arg Ala His Ile  
 3605 385                    390                    395                    400  
 3607 Leu Gly Ile Pro Ile Lys Ala Ala Ala Asp Asn Leu Gly His Ser Met  
 3608                    405                    410                    415  
 3610 Gln Val His Thr Gln Thr Tyr Gln Arg Trp Phe Ser Leu Asp Met Arg  
 3611                    420                    425                    430  
 3613 Lys Leu Ala Ile Asn Gln Ala Leu Thr Lys Arg Asn Glu Phe Glu Val  
 3614                    435                    440                    445  
 3616 Ile Arg Glu Glu Asn Ala Lys Leu Gln Ile Glu Asn Glu Arg Leu Arg  
 3617                    450                    455                    460  
 3619 Met Glu Ile Glu Lys Leu Lys Met Glu Ile Ala Tyr Lys Asn Ser  
 3620 465                    470                    475  
 3727 <210> SEQ ID NO: 69  
 3728 <211> LENGTH: 342  
 3729 <212> TYPE: PRT  
 3730 <213> ORGANISM: Artificial Sequence  
 W--> 3731 <220> FEATURE: *insert*  
 3731 <223> OTHER INFORMATION: Description of Artificial Sequence: DNA sequence  
 3732                    coding for fusion protein NLS-Ssv  
 E--> 3734 <400> SEQUENCE: 69  
 3735 Met Pro Lys Lys Lys Arg Lys Val Thr Lys Asp Lys Thr Arg Tyr Lys  
 3736 1                    5                    10                    15  
 3738 Tyr Gly Asp Tyr Ile Leu Arg Glu Arg Lys Gly Arg Tyr Tyr Val Tyr  
 3739                    20                    25                    30  
 3741 Lys Leu Glu Tyr Glu Asn Gly Glu Val Lys Glu Arg Tyr Val Gly Pro  
 3742                    35                    40                    45  
 3744 Leu Ala Asp Val Val Glu Ser Tyr Leu Lys Met Lys Leu Gly Val Val  
 3745                    50                    55                    60  
 3747 Gly Asp Thr Pro Leu Gln Ala Asp Pro Pro Gly Phe Glu Pro Gly Thr  
 3748 65                    70                    75                    80  
 3750 Ser Gly Ser Gly Gly Gly Lys Glu Gly Thr Glu Arg Arg Lys Ile Ala  
 3751                    85                    90                    95

*This is not a  
DNA  
sequence.*

*Please correct  
any sequences  
showing this  
error.*

*see p. 7 for more errors*

## RAW SEQUENCE LISTING

DATE: 04/03/2003

PATENT APPLICATION: US/10/014,099E

TIME: 14:43:10

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

```

3753 Leu Val Ala Asn Leu Arg Gln Tyr Ala Thr Asp Gly Asn Ile Lys Ala
3754           100           105           110
3756 Phe Tyr Asn Tyr Leu Met Asn Glu Arg Gly Ile Ser Glu Lys Thr Ala
3757           115           120           125
3759 Lys Asp Tyr Ile Asn Ala Ile Ser Lys Pro Tyr Lys Glu Thr Arg Asp
3760           130           135           140
3762 Ala Gln Lys Ala Tyr Arg Leu Phe Ala Arg Phe Leu Ala Ser Arg Asn
3763 145           150           155           160
3765 Ile Ile His Asp Glu Phe Ala Asp Lys Ile Leu Lys Ala Val Lys Val
3766           165           170           175
3768 Lys Lys Ala Asn Ala Asp Ile Tyr Ile Pro Thr Leu Glu Glu Ile Lys
3769           180           185           190
3771 Arg Thr Leu Gln Leu Ala Lys Asp Tyr Ser Glu Asn Val Tyr Phe Ile
3772           195           200           205
3774 Tyr Arg Ile Ala Leu Glu Ser Gly Val Arg Leu Ser Glu Ile Leu Lys
3775           210           215           220
3777 Val Leu Lys Glu Pro Glu Arg Asp Ile Cys Gly Asn Asp Val Cys Tyr
3778 225           230           235           240
3780 Tyr Pro Leu Ser Trp Thr Arg Gly Tyr Lys Gly Val Phe Tyr Val Phe
3781           245           250           255
3783 His Ile Thr Pro Leu Lys Arg Val Glu Val Thr Lys Trp Ala Ile Ala
3784           260           265           270
3786 Asp Phe Glu Arg Arg His Lys Asp Ala Ile Ala Ile Lys Tyr Phe Arg
3787           275           280           285
3789 Lys Phe Val Ala Ser Lys Met Ala Glu Leu Ser Val Pro Leu Asp Ile
3790           290           295           300
3792 Ile Asp Phe Ile Gln Gly Arg Lys Pro Thr Arg Val Leu Thr Gln His
3793 305           310           315           320
3795 Tyr Val Ser Leu Phe Gly Ile Ala Lys Glu Gln Tyr Lys Lys Tyr Ala
3796           325           330           335
3798 Glu Trp Leu Lys Gly Val
3799           340

```

10/01/4,099E 1

<210> 19  
<211> 840  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
oligonucleotide 80d

<400> 19  
ggtaccgagc tccgatcctc tagtaacggc cgccagtgtg ctggaattcg gcttcagcaa 60  
ccaggctccc cagcaggcag aagtatgcaa agcatgcatc tcaattagtc agcaaccagg 120  
tgtggaaagt ccccaggctc ccagcaggc agaagtatgc aaagcatgca tctcaattag 180  
tcagcaacca tagtcccgcc cctaactccg cccatcccgc ccctaactcc gccagttcc 240  
gccattctc cgcccatgg ctgactaatt ttttttattt atgcagaggc cgaggccgcc 300  
tcggcctagg aacagtcgac gacactgcag agacctactt cactaacaac cggtagagtt 360  
cgtggaccag atgggtgagg tggagtacgc gcccggggag cccaaagggtt accccagttg 420  
gggcactact cccgaaaacc gttcttgat ccataacttc gtatagcata cattatcgca 480  
agttataccg ggccaccatg gtcgcgagta gcttggcact ggggttgctt ttgcnvgtc 540  
gtgactggga aaaccctggc gttaccaaac ttaatcgctt tgcagcacat cccccttctg 600  
ccagctggcg taatagcgaa gaggcccgca ccgatcgccc ttccaacag ttgcgagct 660  
gaatggcgaa tggcgcttg cctggcttcc ggcaccagaa gcggtgccc aaagctggct 720  
ggagtgcgat cttcctgagg ccgatactgt cgtcaagccg aattctgcag atatccatca 780  
cactggcggc cgctcgagca tgcactaga gggccaattc gccctatagt ggtcgtatt 840

→ see p. 8  
for error  
explanation



VARIABLE LOCATION SUMMARY

DATE: 04/03/2003

PATENT APPLICATION: US/10/014,099E

TIME: 14:43:11

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:19; N Pos. 536

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/014,099E

DATE: 04/03/2003

TIME: 14:43:11

Input Set : A:\pto.vsk.txt

Output Set: N:\CRF4\04032003\J014099E.raw

L:15 M:270 C: Current Application Number differs, Replaced Application Number  
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:933 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:19  
L:933 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:19  
L:933 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:480  
L:1408 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:23  
L:1411 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:23  
L:3320 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:65  
L:3323 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:65  
L:3528 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:67  
L:3531 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:67  
L:3731 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:69  
L:3734 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:69